Lightning Rods

Lightning rods are pointed copper or aluminum rods placed on roofs of homes and buildings as a method of protecting property from lightning damage. Lightning rods do not attract lightning, but simply provide a favorable path of low resistance for current to travel to ground. The purpose of a lightning rod system is to prevent *physical damage* and to keep the protected structure from burning down by conducting current and the associated heat away from the structure.

However, electromagnetic waves produced by lightning can induce current in nearby electrical wiring and circuitry. This secondary effect of lightning can cause extensive damage to electronics, including computers and modems, televisions, telephones and answering machines.

Did you know.....?

There are about 100 lightning strikes per second on the Earth.

Air around lightning heats to 50,000°F. The surface of the Sun is only 10,000°F.

The energy from one lightning strike could power a 100W light bulb for 3 months.

Keraunomedicine is the medical study of lightning casualties.

Lightning causes **$5 billion** in damages each year in the US.

The distance (in miles) to lightning can be estimated by taking the time (in seconds) between seeing lightning and hearing thunder and dividing by 5.

National Weather Service
Huntsville
"Keeping Service in Weather"

320A Sparkman Drive
Huntsville, AL 35805

Phone: 256-890-8503
Fax: 256-890-8513
Webpage: www.srh.noaa.gov/hun/

LIGHTNING SAFETY

Lightning strikes over Guntersville Lake in Marshall County on April 19, 1999. Picture courtesy of Bob Blankenship.

Lightning kills an average of 73 people each year in the US. That is more than hurricanes or tornadoes!

NATIONAL WEATHER SERVICE
HUNTSVILLE

LIGHTNING SAFETY TIPS

Lightning Safety Tips:

1. The 30/30 Rule - If lightning precedes thunder by less than 30 seconds, then the storm is close and you need to take cover. After the storm, wait at least 30 minutes before leaving shelter and resuming outside activities.

2. Seek shelter in an enclosed building if possible. Open shelters, like those at picnic areas, provide little protection. Small wooden or metal sheds should also be avoided. If a building is not available, get in a vehicle with a metal roof. The metal shell of the car protects you, not the rubber tires.

3. Get out of water. It is a great conductor of electricity. Do not swim, stay off the beach, and do not stand in puddles.

4. Do not wait for rain. Take shelter as soon as you hear thunder. Lightning can strike more than 10 miles from the area of rainfall.

5. Be the lowest point. Lightning strikes tall objects. If no sturdy shelter is available, crouch as low as possible with feet together and place hands over ears to minimize hearing damage from thunder. Keep your distance from other people, allowing 15 feet between.

6. Stay away from trees. Keep twice as far from a tree as it is tall to avoid current traveling through the ground.

Lightning strike over Limestone County on August 19, 1997. Picture courtesy of Dr. Bill McCaul.

7. Listen to NOAA Weather Radio or other weather source to keep up with changing weather conditions.

8. Lightning can enter a building directly, through the ground, or through pipes or wires that extend outside. Stay away from windows and doors. Also avoid phones, electrical equipment and plumbing. Avoid contact with concrete floors and walls which could contain metal reinforcing bars.

9. Remember your pets. Never leave a dog chained to a tree during a thunderstorm. Provide lightning-safe shelter for animals.

10. Protect personal property. Typical surge protectors will not protect electrical equipment from a lightning strike. It is best to unplug computers, televisions, and such well before the storm.

The six most common dangerous activities associated with lightning strikes, in order, are:

1. Work or play in open fields.
2. Boating, fishing, and swimming.
3. Working on heavy farm or road equipment.
4. Playing golf.
5. Talking on the telephone.
6. Using electrical appliances.

SOMETHING TO REMEMBER:

If the hair on your head or neck begins to stand on end during a thunderstorm, you are in immediate danger of being struck by lightning. Take shelter immediately!

National Weather Service Huntsville

"Keeping Service in Weather"

320A Sparkman Drive
Huntsville, AL 35805

Phone: 256-890-8503
Fax: 256-890-8513
Webpage: www.srh.noaa.gov/hun/